United States Department of Agriculture | Forest Service | NA | MFO

Reply to: 3420 August 20, 1990

Subject: Ozone damage to white pine on the Marlington and White Sulphur Ranger Districts

To: Jim Page, Forest Supervisor, Monongahela National Forest

Harry Mahoney reported (8/15/90) seeing large numbers of white pine with brown foliage and some of the trees appear to be dying. Bill Jackson of my staff joined Clark Haynes (WV Dept. of Ag.), Dr. Bill MacDonald (WVU) and Bill Kidd (WVU Extension Forester) on August 16 to determine the cause of the browning. Bill Kidd had received similar reports of damage from several sources.

The damage is believed to be a response to either a large dose or prolonged exposure to ozone. Symptoms of needle tip burning were seen frequently on white pine south of Dunmore and north of Minnehaha Springs. We have received reports that the damage extends southward to White Sulphur Springs.

Symptoms of ozone damage are not evident on all white pines because this species has individuals within a population exhibiting varying degrees of susceptibility to ozone. Some of the white pines are going to die, but most of the trees will probably recover from the exposure. Bill MacDonald observed similar conditions in August 1981 and he believes the severity of the damage could be greater this year than in 1981.

Bill Jackson has informed me that a biological evaluation could be conducted the week of September 10, 1990. He would have to conduct the work in the near future because the symptoms might not be evident next year. We should be able to estimate how many white pines have died and estimate what proportion of the white pine population is susceptible to ozone. Please contact Bill if you are interested in having an evaluation conducted.

PETER A. RUSH
Field Representative
Forest Pest Management

cc: AO
WVU, B. MacDonald
WVU, B. Kidd
NEFES, K. Jensen
White Sulphur Springs RD
Marlington RD
WVDA, C. Haynes

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